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COLLEGE OF AGRICULTURE

DEPARTMENT OF BIOCHEMISTRY
UNIVERSITY OF WYOMING
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June 4, 1984

Dr. William Berry
AFOSR/NL
Building 410
Bolling AFB DC 20332

AFOSR-TR- 89-1796

Dear Dr. Berry,

We purchased the Applied Biosystems gas-phase protein sequencer ($98,500 + $1,500 shipping and insurance) with our grant (AFOSR-83-0208). These are the identical items which we proposed to purchase.

The major research conducted with this machine has been the proposed characterization of opioid and non-opioid peptides secreted by the adrenal medulla. To date the sequencer has run 110 samples of which 75 have been adrenal medullary peptides. The other samples have been snake toxins ~~(Dr. I. Kaiser also in the proposal)~~ immunoglobulin fragments, ~~(Dr. C. Litaan, Sloan-Kettering)~~ photolabeled fragments of carnitine acetyltransferase, ~~(Dr. Roland Borden)~~, and several single samples from a variety of investigators. Keywords: Proteins, gas phase, sequences.

I have included the first paper we have published using this instrument. We currently have four papers submitted also using this instrument. There is absolutely no doubt that the sequencer provided by this grant has enabled us to carry out research we never would have attempted previously. We have been able to clearly identify species differences in proenkephalin processing in the adrenal medulla. We have also identified at least three different peptides which we believe are new hormones and which we are pursuing from that point of view.

Finally, we wish to express our sincere gratitude to the AFOSR for this grant. Although it is not really reflected in our first year's operation there are a number of research projects which have either been initiated or which have shifted emphasis due to the availability of this protein sequencing. In addition, a number of investigators at other institutions are interested in collaborations based on our sequencing capabilities.

Sincerely yours,

Randy V. Lewis
Assistant Professor of Biochemistry

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